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ABSTRACT

This study examined gender roles and career orientation among 126 male and 126 female fourth through sixth grade gifted students. The Children's Sex Role Test was used to assess masculinity, femininity, and androgyny. While results showed more gender appropriate scores for males than females, overall more boys than girls were classified as androgynous. Both genders overwhelmingly expressed interest in professional occupations, but boys gave their reason for this choice as "challenge" while girls explained their choice in terms of "concern for others." Boys chose traditionally masculine careers more often, but a trend was observed for girls to choose these careers more often in upper grades. Contains 18 references. (PB)

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ANDROGYNY AND OCCUPATIONAL ORIENTATION AMONG GIFTED ELEMENTARY SCHOOL CHILDREN*

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ABSTRACT

The study examined Androgyny and career orientation among gifted elementary school children. The subjects were 252 fourth, fifth and sixth grade gifted students from several Southern California school districts (126 boys and 126 girls). Moore's (1985) recently developed Children's Sex Role Test (CSRT), similar in format to the Bem Sex Role Inventory, was used to measure Masculinity, Femininity, and Androgyny. While results showed higher sex appropriate scores for boys and girls, overall more boys (68%) than girls (52%) were classified as Androgynous. There were no sex by grade interactions in the Sex-role scores. Both boys and girls overwhelmingly expressed interest in professional careers. However, the most prominent reasons given for the career choice were along traditional lines: Boys gave "challenging", and girls "concern for others" as reasons for their choices. Boys chose masculine type careers most often, and there was a trend for girls to choose masculine type careers more often in the upper grades.

Androgyny and Career Orientation Among Gifted Elementary School Children

Intellectual giftedness has enjoyed a recent upsurge of interest among researchers (Horowitz and O'Brien, 1986) as well as educators (Khatena, 1982; Tannenbaum, 1983). Furthermore, although a body of literature has emerged on the sex role development of gifted children (e.g. Blaubergs, 1978) and their career choices (e.g. Rodenstein Pfleger & Colangelo, 1977), the relationship of these variables are not well understood.

In an extensive review of the literature, Tittle (1986) acknoledges the need to study gender related factors, academic achievement and career patterns in relation to each other. In line with this suggestion is a study by Fox, Tobin and Brody (1981) that examines the differences between gifted boys and girls in career interests, and sex-role orientation over a 7 year period. They indicate that among girls between 1972 and 1979, there was increased interest in investigative careers which tend to be male dominated. However, the role models they knew tended to be in sex appropriate careers. Interests unconventional for their gender are not uncommon among bright boys and girls (Vernon, Adamson & Vernon, 1977) and is consistent with non entrenched thinking (Davidson & Sternberg, 1984) observed among the gifted.

Gifted and creative adults (Blaubergs, 1978; Torrance, 1962; Bruch & Morse, 1972) and children (Dudek, 1974; Wells et al. 1982) along with unconvention interests are also known to display traditionally masculine and feminine trait characteristic of androgynous individuals.

The purpose of the present study is to examine androgyny and career orientation among fourth, fifth and sixth grade gifted boys and girls. Although sex-role development among children has been extensively studied, the construct of psychological androgyny has been essentially ignored as a separate developmentally meaningful variable. The examination of androgyny among gifted children has the potential of establishing androgyny as an important factor in the development of sex-role identify if it can be shown to be reliably measured and distinguished from traditional sex-roles. Since gifted children represent a population that experiences untraditional role expectations such as higher school achievement for girls and more creativity for boys, a strong androgyous sex-role identity, on the one hand, and untraditional career orientation, on the other, could be predicted.

Method

Subjects

The subjects were 126 boys and 126 girls from the fourth, fifth and sixth grades of the Gifted and Talented Education Program (GATE) in several school districts in the San Gabriel Valley area of Southern California. The criteria used for selection into GATE include: (a) A score at or above the 98th percentile on an individual intelligence test; (b) A score at or above the 98th percentile on the California Achievement Test in two or more areas in one year, or a score at or above the 98th percentile for total test battery. Achievement areas to be considered on the test are reading, language and math; and (c) A score at or above the 98th percentile for the California Achievement

Test in the same area for two years. The goals of the GATE program are identified as academic excellence, critical thinking and problem solving, creativity, leadership, career awareness and social service.

Measurements

(a) Children's Sex Role Test (CSRT): This test was recently developed by Moore (1985) similar in form and development to the Bem Sex Role Inventory for adults (Bem, 1974). It is a self-report measure designed to assess Masculinity and Femininity as independent dimensions for children aged ten years and older. To develop the measure the desirability of a list of 50 adjectives or phrases chosen from a fourth grade spelling list was rated on a 5 point Likert scale by 14 boys and 14 girls in the sixth grade using the following format: "Most people think it is good for girls (or boys) to be ---." The "boys" and "girls" statements were rated in counterbalanced order. The significant difference of the mean desirability ratings for boys and girls were used to identify Masculine and Feminine characteristics respectively. The final questionnaire contained eight Masculine, eight Feminine and eight Neutral (non-significant differences in desirability ratings) items. Both the Masculinity and Femininity scales included six socially desirable and two undesirable items. Later administration of the test to 74 fourth, fifth and sixth grade girls and boys, twice over a three-day period, showed item discrimination in the appropriate direction between high and low total scorers on the Masculinity and Femininity subscales. On the total scores strong sex appropriate differences were also observed. The split-half reliability for both Masculinity and Femininity measures were .86 and test-retest

reliability were .79 and .80, respectively. In the present study, significant sex appropriate differences were also observed in all 3 grade levels for both Masculinity and Femininity (Table 1). Also, the Masculinity and Femininity scores were normally distributed with reliability alpha coefficient of .69 and .64, respectively, a little low but acceptable for research purposes.

For each adjective subjects were asked to circle "always", "usually", "sometimes" or "never" in response to the question , "Are you a (insert adjective) person ?" Scores of 4,3,2,1 were assigned to these ratings, respectively. The mean ratings on Masculinity and Femininity were taken as the sex-role scores, and Androgyny was defined as Femininity-Masculinity. A range of $\pm$.5 points around the Androgyny score of zero was used to determine the distribution of sex-typing, with positive scores being the Feminine type.

The following are the items in the order in which they appear on the CSRT; smart (N), brave (M), gentle (F), kind (N), bossy (M), tidy (F), lucky (N), quick (M), weak (F), angry (N), tough (M), polite (F), playful (N), bold (M), sweet (F), bright (N), dirty (M), shy (F), good (N), strong (M), soft (F), sad (N), like other boys (M), like other girls (F) (N=Neutral, M=Masculinity, F=Femininity).

(b) Occupational Orientation: Demographic questions were asked on a separate sheet of paper which included occupation related questions. Responses to the question, "What do you want to do when you grow up ?" was used to determine occupational orientations. The reasons for the preferences were determined from responses to, "What is special about what you want to be ?" Parental occupation was also determined by

asking, "What kind of work does your father/stepfather (mother/stepmother) do ?" Parental occupation and personal occupational orientation were evaluated for sex-appropriateness as well as for being professional versus skilled or semi-skilled. Occupations were sex-typed based on whether they were traditionally male- or female-dominated. Two judges, including one of the investigators and a teacher, independently categorized the responses to all the occupation related questions, blind to the gender and grade of the subjects, with 90% initial agreement, and the rest by consensus.

The reasons for occupational preference were determined with the same procedure using the following categories: Challenge/excitement, Concern for others, Interest/curiosity, Recognition of own ability, Money, and other.

Procedure

The two page survey, with the demographic questions on top, was administered in a classroom setting by the regular GATE teacher during class time. The survey took 15 minutes to complete. Data collection was done over a five-day period. Special attention was given to assuring the students that there were no "right" or "wrong" answers.

Results

Table 1 presents the means and standard deviations on the four measures of Masculinity, Femininity, Neutral, and Androgyny for boys and girls in three grade levels.

Insert table 1 about here

Scores were subjected to a Sex by Grade (2x3) analysis of variance. As expected, strong sex differences on both scales were obtained with boys scoring higher on Masculinity (F (1,243) = 30.18, P <.001) and girls scoring higher on Femininity (F (1,245)= 92.48,P <.0001). There were no significant interactions, but the Grade main effect was marginally significant on Femininity (F (2,245)=4.09, P .05) with scores getting higher by grade.

The Sex by Grade analysis of variance on the Androgyny scores (Femininity-Masculinity) showed a strong Sex main effect(F (1,246)= 103.78,P <.0001) with no Grade or interaction effects. As expected boys tended to be masculine-typed and girls feminine typed. No differences were obtained on the neutral scores. Sex by parent-occupation (professional-nonprofessional) analysis of variance on Androgyny scores showed no effects.

Similar to Bem (1974), a range of $\pm$ .50 points around the sex-role difference score of zero (Femininity-Masculinity) was used to determine the distribution of sex-typing (Table 2). While 26% percent of boys and 42% of girls were appropriately sex-typed, there were more androgynous boys (68%) than girls (52%). The gender by sex-role typing Chi Square analysis was highly significant (P<.001).

Insert Table 2 about here

Concerning occupational orientation (Table 3) both groups irrespective of grade levels expressed overwhelming interest in professional areas (boys= 83% and girls= 90%). Boys anticipated masculine-type careers more often than did feminine or neutral type

(Table 4). Girls also preferred more masculine-type occupations except in the fourth grade. There was also a trend for girls to choose masculine-type careers more often as the grade levels increased. Boys in all grade levels showed stronger preference than girls in masculine-type occupations.

Table 5 shows reasons given for occupational choices. The most prominent response among boys was "challenging/exciting", while girls indicated "concern for other" most often.

Insert Table 3, 4 and 5 about here

Discussion

The present finding of strong identification of the subjects with their appropriate sex roles is not surprising and is consistent with developmental theory and research findings (i.e. Ambron, 1978; Weitzman, Burns & Friend, 1985), and contributes to the validity of the CSRT as a measure of sex-role identity for children.

It was unexpected to find more boys than girls classified as Androgynous. This does not agree with Blauberg's (1978) finding of gifted girls being more androgynous. Such a discrepancy may be a methodological artifact partially due to the use of different measuring instruments, classifications procedures as well as different samples. Without further evidence any effort to explain more androgyny among gifted boys would have to be speculative and tentative. In order to argue for stronger androgyny among gifted boys one might look for differential contribution of external factors, such as female teachers

as models or diffferences in perceptual or cognitive processes such as non-entrenched thinking (Sternberg, 1981) in self-characterization. It is conceivable that the life experiences of giftedness impact boys and girls differently, such that blended sex role characteristics become more readily internalized by boys. Along these lines it may be valuable to compare the experiences of Androgynous and sex-typed boys as well as Androgynous and Sex-typed girls.

In the area of occupational orientation both boys and girls show strong interest in professional occupations commonly observed among gifted children across all three grade levels (Table 3). However, the Sex-typing of the occupational preferences differ with grade levels (Table 4). The male-dominant preferences among boys is strong and constant across grade levels. For girls it is weak in 4th grade (18%) but increases dramatically in the 5th (51%) and the 6th (58%) grades (X^2= 34.46, p<.001). The pattern for the preference of female-dominant occupation is a mirror-image of the male-dominant occupations. Boys show almost no preference for female-dominant occupations, but it is strong for girls at the 4th grade level (45%) and diminishes over the 5th (24%) and 6th (24%) grades.

The preference of male-dominant occupations among boys is not unexpected . However, increasing preference of male-dominant occupations among gifted girls in the 5th and 6th grades is interesting. Normally in these grades there is an increasing awareness of femaleness among girls, accompanied by the emergence of traditionally feminine interests in grooming, dress, etc. Consequently, it would be natural to find at these grade levels

interest in traditional female occupations. The preference for male-dominant occupations among gifted girls in the higher grades should be examined in the light of experiences surrounding giftedness in and out of the classroom,and compared to a matched control group. Furthermore, inspection of Table 1 shows that the Androgyny score of girls moves from the Feminine Sex-typing in the 4th grade toward Androgyny by the 6th grade suggesting a possible parallel between Androgyny and preference for male dominated occupations among gifted girls. Whether increased preferences for male-dominated occupations in 5th and 6th grades parallels a move toward greater androgyny among girls needs to be examined in future studies.

The reasons given by the two groups for preference of occupational choices is summarized in Table 5. The girls gave "concern for others" as the most popular reason, and the boys gave "challenge/excitement" as the most popular reason. These reasons are traditionally sex appropriate and agree with findings reported by Fox, Tobin and Brody (1981). The second most frequent responses in both groups was "interest/curiousity" followed by " recognition of our ability", which go beyond traditional sex-roles and may reflect the impact of experiences related to giftedness. The gifted programs by reinforcing inquisitiveness and enhancement of individual talents may determine expectations of what future careers should offer, and perhaps even contribute to actual career choices, which can be demonstrated through longitudinal studies only.

Generally, in self-characterizations and reasons for various occupational preferences some degree of traditional sex-role orientation appears to be present among gifted elementary boys and girls. However, among both boys and girls there is a strong preference for professional occupations and a stronger preference for male-dominated occupations among upper elementary gifted girls. Furthermore, more boys than girls tend to be androgynous in their self-characterizations. Whether being in a gifted program effects higher androgynous identity, and actual career choices in the long run need more in-depth analysis.

Table 1

Means and Standard Deviations on Masculine, Feminine, Ne

4th, 5th and 6th Grade Gifted Boys and Girls,and Alpha S

Sex Role Descriptors		Grade 4		Gra
		Boys (n = 35)	Girls (n = 22)	Boys (n = 46)
Masculinity	$\bar{X}$	2.56	2.18**	2.60
(Alpha=.69)	S	.44	.47	.39
Femininity	$\bar{X}$	2.23	2.72***	2.24
(Alpha=.64)	S	.39	.40	.37
Neutral	$\bar{X}$	2.74	2.80	2.74
	S	.31	.29	.33
Androgyny	$\bar{X}$	-.34	.55***	-.37
	S	.59	.73	.50

*p <.05; **p <.01; ***p <.001

utral and Androgyny Scores for
cores on Sex-Role Measures.

de 5		Grade 6		Total	
Girls (n = 49)	Boys (n = 45)	Girls (n = 55)	Boys (n = 126)	Girls (n = 126)	
2.25***	2.51	2.33*	2.56	2.27***	
.40	.43	.36	.42	.40	
2.65***	2.37	2.75***	2.28	2.72***	
.34	.39	.30	.39	.33	
2.79	2.71	2.75	2.73	2.77	
.35	.30	.24	.31	.29	
.44***	-.14	.42***	-.28	.45***	
.53	.60	.50	.57	.56	

Table 2

Distribution of Sex-Role Typing Among Gifted Elementary

Gender	Masculine	
	n	Percent
Boys (n=126)	33	26.2
Girls (n=126)	8	6.3
Total (n=252)	41	17.8

χ^2=52.43, $p < .001$, C=.38

School Boys and Girls.

Sex-Role Typing			
Androgynous		Feminine	
n	Percent	n	Percent
86	68.3	7	5.5
65	51.5	53	42.1
151	59.9	60	23.8

Table 3

Professional Occupational Orientation by Gifted Elementa

Orientation		Gra 4th (Boys n = 35) (Girls n = 22) n	%	(Boy (Gir n
Professional*	Boys	29	83	39
	Girls	21	96	40
Skilled/ Semi-skilled**	Boys	2	6	2
	Girls	1	5	4
Undetermined**	Boys	4	11	5
	Girls	0	0	5

* $\chi^2 = 3.80$ N.S.

** Chi Square was not run because of too few n's in the

ry School Boys and Girls

ades

5th		6th	
ys n = 46)		(Boys n = 45)	
rls n = 49)		(Girls n = 55)	
%		n	%
85		36	80
82		52	95
4		1	2
8		2	4
11		8	18
10		1	2

e cells.

Table 4

Sex Typing of Occupational Orientation by Gifted Elementary

Occupational Typing		Gra 4th n	%	n
Male *	Boys	26	74	35
Dominant	Girls	4	18	25
Female**	Boys	1	3	0
Dominant	Girls	10	45	11
Neutral**	Boys	4	11	6
	Girls	8	36	8
Don't**	Boys	4	11	5
know	Girls	0	0	5

* $\underline{X}^2 = 34.46$, $\underline{p} < .001$

** Chi-square was not run because of too few n's in the cel

School Boys and Girls

des				
5th		6th		
%		n	%	
76		31	69	
51		32	58	
0		1	2	
22		13	24	
13		5	11	
16		9	16	
11		8	18	
10		1	2	

ls.

Table 5

Reasons for Occupational Orientation by Gifted Elementar

Reason for Preferences	Boys (n = 126)	
	n	percentage
Challenge/Excitement	28	22.2
Concern for Others	13	10.3
Interest/Curiosity	22	17.5
Recognition of Own Abilities	18	14.3
Money	17	13.5
Others	28	22.2

$X^2 = 19.94$, $P < .01$, C=.37

cy School Boys and Girls.

Gender		
	Girls (n = 126)	
e	n	percentage
	9	7.1
	38	30.2
	27	21.4
	17	13.5
	7	5.6
	28	22.2

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